09hr_SC-CUER_CRule_10-057_pt02

Details:

(FORM UPDATED: 08/11/2010)

WISCONSIN STATE LEGISLATURE ... PUBLIC HEARING - COMMITTEE RECORDS

2009-10

(session year)

Senate

(Assembly, Senate or Joint)

Committee on ... Commerce, Utilities, Energy, & Rail (SC-CUER)

COMMITTEE NOTICES ...

- Committee Reports ... CR
- Executive Sessions ... ES
- Public Hearings ... PH

INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... Appt (w/Record of Comm. Proceedings)
- Clearinghouse Rules ... CRule (w/Record of Comm. Proceedings)
- Hearing Records ... bills and resolutions (w/Record of Comm. Proceedings)

(ab = Assembly Bill)

(ar = Assembly Resolution)

(sb = Senate Bill)

(air = Assembly Joint Resolution)

(**sr** = Senate Resolution)

(**sir** = Senate Joint Resolution)

Miscellaneous ... MISC



--- Forwarded Message ----

From: Julie Schneider < jschneider 795@yahoo.com>

To: "Erwin, Deborah - PSC" < Deborah. Erwin@wisconsin.gov>

Sent: Thu, July 1, 2010 4:35:41 PM

Subject: Re: turbine rules

Ok. Thank you Deborah. It is imporant to us. Thank you so much for responding. Julie

From: "Erwin, Deborah - PSC" < Deborah. Erwin@wisconsin.gov> To: "jschneider795@yahoo.com" <jschneider795@yahoo.com>

Sent: Thu, July 1, 2010 10:51:35 AM

Subject: RE: turbine rules

Ms. Schneider,

It looks like you already posted this information using the Public Comment button on our website.

See http://psc.wi.gov/apps35/ERF_view/viewdoc.aspx?docid=134010.

Deborah Erwin

From: Julie Schneider [jschneider795@yahoo.com]

Sent: Wednesday, June 30, 2010 10:03 PM

To: Newman, Paul C - PSC

Subject: turbine rules

This memo is critical it be included with the new rules request for the turbines and this is our public reasons why we do not the government to exclude us from the Public Service Committee rule setting. We need to be grandfathered in to the new rules.

Please assist me in getting this added?

We are asking you to hear us out before you make any more rules or decisions

Regarding windmills.

I am hearing you do not want to include us in your new regulations and you want

To leave us living in this environment without having to deal with our issues.

To do this is not only unfair, and inhumane, it is an act of "see no evil", that

Is disrespectful to us as citizens of this country. I am wondering if any of you voting

That way really feel "right" about it. I am asking you to reconsider.

Do you know what it is like to come home and not be able to watch tv when you

are devastated your 4 year old nephew has a brain tumor and you are desperate for something to take away the images that are burned in your brain of his pain, his huge "port" they stuck in his chest for future chemo. He had terrible misery and was moving continuously to escape pain. Do you know the images in your brain watching that? Do you have any idea how bad you want to go back to the comfort of your home where you want to cry from mental exhaustion and then fall asleep watching some show that gives your mind an hour of rest? You turn on the television and you cannot watch it. It is "out" again. You cannot even imagine the sickness in your stomach when you realize your "sanctuary" at home is gone. You no longer have a place to go.

You have Constant flickering in the morning for an hour. You cannot escape from it, even with the blinds drawn. You cannot move into any room to be free of it if it has windows on that side of the home. You cannot fall asleep at night from the noise that ensues when Winds are more than 11 mph. It is not a "lulling" sound, but a grinding after rain. It is like a constant jet going over. It is also accompanied by a whooshing sound. It is not a comforting dull whoosh... It is a blackboard fingernail type noise that keeps you awake and drives you on the brink of madness. Everytime it rains, you cannot watch tv. Just when you are bored silly...you can't even watch tv. That has been taken away. You get irritable. But, W.E. and the people responsible don't really care. It isn't them. You find out they have given the neighbors radios, and all kinds of bandaids. They have told them they will pay for 120 channels on dishnetwork, but not you because you already had a dish. You are discriminated against. You fight and argue with them for over a year. You are so sick of it, and feel lost. What can you do? You have been lied to, argued with, discriminated against, and you are sick thinking about it. Sick to your stomach. Do you really think you wouldn't be like that? Try living it for even a week. You will not believe what this has done to your life. If you would have told me that 5 years ago, I would have said "I don't believe it".

We are peaceful people. We do not look to make trouble for anyone. We even waited to see how the windmills affected us before we judged them, because that is what is fair.

Yet, no one considered what is fair for us residents. We are in a low area. When I asked the engineer about the noise, and we asked them if they considered the geological location of them in respect to homes, he admitted they did not. We told him We have constant droning. We have constant pressure we can feel in our ears. We wake 3-4 times a night. We have difficulty getting back to sleep. We live with flickering. We live with noise. When we walk now, we hear nothing. We used to hear birds. Now we hear an eerie silence. Nothing. We had moved here for privacy and quiet. We had moved here for wildlife and nature. That was taken away. Our beautiful view of the land was destroyed. Yet, that was the minor part. The major was the lack of sleep, the irritability, the headaches, the ear pressure, the flickering, the noise, the loss of home value. This isn't just a group of "whiners". This is reality. This is a company that stole our homes.

We are afraid. We had an expert on electrical here to tell us there is no such thing as stray voltage, yet we see cows die, etc in the news. "Oh no – there is no such thing as stray voltage. So, when we asked about energy surges, they couldn't answer that. We live in fear. We are worried when we let our 3 two year old grandchildren run in the yard. We are afraid to step on the lawn after a rain. We cannot stand it outside on the lawn during flickering, so we can't stand it inside our home, and we cannot stand it outside.

Our biggest complaint is our home value has dropped drastically. We had a couple people interested in our home, waiting for it to come up for sale. We finally decided maybe it was time. We are unhappy here now due to the windmills. But, of course, they are no longer interested. They said "No, we would NEVER want to live in that area — you have windmills." So I called the president of the North East Realtors Association. "Yes, you have a huge loss in value, he said. I don't know the exact percent, but I can tell you I do not have people willing to live in that area unless the price is drastically reduced or not at all. I would testify to that." So, we have home value loss. Everything we put into our home, was with a plan to sell it someday and retire in a smaller home. It is now gone. So basically our retirement was also taken away from us. Not just our home. Our retirement. Why are a small isolated group of people burdened with all the liabilities and burdened with health hazards and long term affects "for the good of the nation." It hasn't even been proven this will "help" the nation. In fact, the engineer admitted to us it wouldn't really. He also stated they put them where they had easy access to high lines. They didn't care if there were residents. They had no right to take away our property. They had

not right to inflict us with flickering and noise without

restitution. How can you people even consider leaving us out of the rules being set up? Can you do that and sleep at night? Can you really turn your back and walk away knowing what has been taken from us? It doesn't matter because it isn't you?

Do you really want to believe you will never pay for that? We need to be grandfathered in to the new rules.

Do you know what it feels like to have your home literally "taken" from you without having a thing to say about it. Everything you have always worked for has now suddenly been taken from you without even a word. You never were able to voice your opinion because you were not the property owner where they stuck these units. Our happiness, health, well being, financial value, everything is gone. Yet, you want to ignore this, and just make "future" laws. Why would you do that to innocent people?

We are asking you, if you have any kind of conscience, to please reconsider that. Please help us. We haven't done anything except work hard for our homes. It feels like we have had them stolen, and no one wants to step outside of the box and help us. We

Are wondering how you can be so cold. Because we are a number? Well, this number tries to sleep. This number has headaches and pressure in our ears. We have flickering.

This number cannot believe a government allowed this. Cannot believe any fellow

Citizens would do that to someone. This number feels sick and hopeless and feels fear and disgust. We want our home back. It is that simple.

We live with days of "airline" type pressure in our ears and lack of sleep. We are often

Irritable. The flickering causes confusion. I race to get out of the house because I cannot

stand it. It is literally driving us mad. Why shouldn't we be compensated? Do you really believe that is right?

I am sickened when I hear no one will help. Why? What have we done to deserve that?

Why are you turning your backs on us? For greed? For political reasons? Please reconsider and get the residents, this was forced upon, some help. Please do what is right for us. The helpless feeling is sickening in my stomach. It is destroying us.

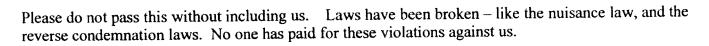
At a minimum, give us our home value back so we can move it we wish. We didn't ask for anything from the way you have destroyed our lives. We are simply asking for our home value back.

We argue when we are irritated that the tv doesn't work. We blame each other because neither of us has been able to get help from someone. We get so irritable it is unbelievable. I am ashamed, but it is still a fact. We have asked W.E Energies for

Help, and they came right out and told us "We won't deal with individuals on this.".

W.E. Energies are thieves in our mind. . They have stolen our home. We are asking you now to help us. Please.

We are not "just a number". We are people. We give to charities. We have family. We work for our home. We deserve our home value. We have worked our entire career for that. We just want the security of our home again, and the value returned to us. I don't think that is much to ask when I hear about the High wages they pay workers, and the big money W.E. officials are reaping, and the government is "gaining". We aren't asking for big money. We are asking for our home value back so we can now make the choice on whether to move or not. Our choice has been taken away. We just want it returned. This is a small price for you to pay. Do not pass these rules without including us. Do not leave us on the side like a bastard child. We have a place in this group. Don't kick us to the curb because of politics please. If someone stole from you, you would feel sick and you would want to be compensated. If someone destroyed your home, you would expect payback. If someone wrecked your lives, you would want it back like we do.



All we can do is ask you to please do what is right now.

Thank you for listening.

Mr & Mrs. David E Schneider



(C-Rule 10-057?)



note: Since this testimany live completed a nother book - bringing the number to 17



Since the date of this testimony 2 more families I've interviewed have put their homes up for sale.



Submitted: 7/5/2010 5:54:35 PM

Frule 10-0573

COMMENTS FILED ELECTRONICALLY IN

Wind Siting Rules

1-AC-231

Commentor Information:

Name: Curt Hilgenberg Address: 7312 Holly-Mor Rd

City: Greenleaf State:WI Zip:54126

Comment:

What does Al Haas, a farmer in Fon du Lac County, think of the noise issue from industrial turbines on his farm? Below are some comments he made to a Fox 11 reporter.

"Not these big, industrial turbines. They just don't belong here," said Al Haas, a farmer in the Fond du Lac County town of Malone.

Haas has three turbines spinning on his farmland. He makes about \$15,000 a year just for having them there. That's a nice side Income with no extra work involved.

"We were told we would basically be able to farm right up to it. We were told there would be basically no land loss to speak of, it just sounded like a good deal," said Haas.

That extra money? Haas now says it isn't worth it. He blames the wind turbines for damaging his crops and interfering with his TV reception.

But his main complaint is the noise. He says it keeps him up at night and has led to stress.

"It can sound like a freight train going through the other end of town. The problem is that freight train don't have a caboose. It don't stop. It just keeps rolling and rumbling on and on and on, for hours and hours," said Haas.

To see the whole story, go to http://www.fox11online.com/dpp/news/wind-blowing-storm-strong-opinions

I affirm that these comments are true and correct to the best of my knowledge and belief. Curt Hilgenberg

Submitted: 7/5/2010 12:52:07 PM

COMMENTS FILED ELECTRONICALLY IN

Wind Siting Rules

1-AC-231

Commentor Information:

Name: Curt Hilgenberg Address: 7312 Holly-Mor Rd

City: Greenleaf State:WI Zip:54126

E-mail: curthilg@Yahoo.com

Comment:

Wind energy slackers?

According to Barnaby Dinges, a member of the American Wind Energy Association and the President a wind energy consulting group who will likely profit from lenient turbine siting rules, when it comes to wind energy "Wisconsin is already an energy slacker. Wisconsin is behind every other Midwest state in wind development, except Michigan which is gaining fast." [1]

According to the 2004 report by the Energy Center of Wisconsin, "Eastern Wisconsin has smaller farms and higher rural population density making it less suitable for successful wind projects." [2]
According to the DOE, Wisconsin ranks 1 - 2 on a 7 point scale on the DOE wind power classification. A poor to marginal rating. Class 4

According to the DOE, Wisconsin ranks 1 - 2 on a 7 point scale on the DOE wind power classification. A poor to marginal rating, Class 4 and above are considered good resources for powering industrial size wind turbines. [3]

Wisconsin has higher rural population density.

Wisconsin has smaller farm sizes.

Wisconsin has poor wind resources.

Does it make sense for Wisconsin to keep up with states like Illinois, Indiana, Iowa, Ohio, Minnesota and the Dakotas in wind energy development? The obvious answer is no! It makes sense to generate wind powered electricity where the wind quality is good and the rural population is low. This makes sense in both economic returns for the developers and in impact to the people living in the area

Using 90 turbine sites of the Glacier Hills as an example;

- 15 are sited less than 1250 feet from a non-participating residence.
- 39 are sited less than 1500 feet from a non-participating residence.
- \cdot 60 are sited less than 2000 feet from a non-participating residence.
- · 81 are sited less than 2500 feet from a non-participating residence.

This as a tremendous burden placed upon the non-participation residents. The development of industrial size wind turbines in Wisconsin is not being done with the safety of the residents in mind. They are being shoehorned into the small spaces available with complete disregard for the people in the area. Build them where they make sense, and where they won't harm the people already living there.

Using Mr. Dinges' line of thinking, Wisconsin is also a slacker when it comes to oil wells, gold mines, and ocean front condos. It only makes sense to develop the resources that we have in Wisconsin. If industrial wind development is not a good fit (and it isn't) then don't force it upon unwilling rural communities. What happened to the democratic process when the State of Wisconsin, a developer and a few land owners decide the fate of the majority of the people living in the area?

What if Wisconsin remains a wind energy slacker when it comes to industrial size turbines and instead uses the millions of dollars in wind energy subsidies and develops a small roof top wind system that wouldn't negatively impact the rural countryside? We already have several top notch engineering schools in Wisconsin, let's give them some research projects.

What if Wisconsin remains a wind energy slacker, but becomes a leader in electricity conservation? How much electricity would be saved if every incandescent light bulb in the state were replaced with LED bulbs? Again, we could use the wind energy subsidies` to further development the LED technology and bring down the cost to an affordable level.

Like the old saying, if the only tool in the toolbox is a hammer, every problem becomes a nail. Industrial wind turbines scattered over the entire state and negatively impacting the lives of thousands of families in Wisconsin should not be the only tool. Use wind where it makes sense. Use conservation, geo thermal, solar, etc. where wind is not a good fit.

- [1] http://psc.wi.gov/apps/erf_share/view/viewdoc.aspx?docid=133945, page 5.
- [2] http://www.ecw.org/prod/231-1.pdf
- [3] http://www.windpoweringamerica.gov/maps_template.asp?stateab=wi

I affirm that these comments are true and correct to the best of my knowledge and belief. Curt Hilgenberg

Submitted: 7/5/2010 5:57:33 PM

COMMENTS FILED ELECTRONICALLY IN

Wind Siting Rules

1-AC-231

Commentor Information:

Name: Curt Hilgenberg Address: 7312 Holly-Mor Rd

City: Greenleaf State:WI Zip:54126

Comment:

I'd just like to site a recent article from the Wall Street Journal from March 1, 2010.

March 1, 2010 by Robert Bryce in Wall Street Journal
People living near turbines increasingly report sleep deprivation, headaches and vertigo. The wind Jobby says there's no proof

Imagine this scenario: The oil and gas industry launches an aggressive global drilling program with a new type of well. Thousands of these new wells, once operational, emit a noxious odor so offensive that many of the people living within a mile of them are kept awake at night. Some are even forced to move out of their homes. It's easy to predict the reaction: denunciations of the industry, countless lawsuits, and congressional investigations.

Now substitute wind for oil and gas and consider the noise complaints being lodged against wind projects around the world.

The Obama administration has made the increased use of wind power to generate electricity a top priority. In 2009 alone, U.S. wind generation capacity increased by 39%. But more wind power means more giant turbines closer to more people. And if current trends continue, that spells trouble.

In 2007, a phalanx of wind turbines were built around Charlie Porter's property in rural northern Missouri. Soon, Mr. Porter began to have trouble sleeping. So did his wife and daughter. The noise, he told me, made sleeping almost impossible. "We tried everything-earplugs, leaving the TV station on all night." Nothing worked. Late last year he moved his family off their 20-acre farm.

Mr. Porter's story is no isolated event. Rural residents in Texas, Maine, Pennsylvania, Oregon, New York, Minnesota, Wisconsin, Canada, New Zealand, Australia, France and England have been complaining about the noise from wind turbines, particularly about sleep deprivation. Dozens of news stories-most of them published in rural newspapers-have documented the problem.

I've spoken to nine other people in New York, Wisconsin, Ontario, New Zealand, Nova Scotia and England who live, or lived, near wind turbines. All complained of the noise, with sleep deprivation being the most common complaint. For example, Janet Warren, who raises sheep near Makara, New Zealand, told me via email that the turbines near her home emit "continuous noise and vibration," which disturb her sleep and are causing "loss of concentration, irritability, and short-term memory effects."

Complaints about sleep disruption-as well as the deleterious health effects caused by the pulsing, low-frequency noise emitted by the giant turbines-are a central element of an emerging citizen backlash against the booming global wind industry.

Lawsuits that focus on noise pollution are now pending in Maine, Pennsylvania and New Zealand. In New Zealand, more than 750 complaints have been lodged against a large wind project near Makara since it began operating last April. The European Platform Against Windfarms lists 388 groups in 20 European countries. Canada has more than two dozen antiwind groups. In the U.S. there are about 100 such groups, and state legislators in Vermont recently introduced a bill that will require wind turbines be located no closer than 1.25 miles from any residence.

In theory, big wind projects should only be built in desolate areas. But the reality is that many turbines are being installed close to homes. Wind developers put a turbine within 550 meters of Mr. Porter's house. Hal Graham, a retired office manager in Cohocton, N.Y., complains about the noise pollution caused by a turbine 300 meters from his home. Tony Moyer, a plumbing superintendent in Eden, Wis., grumbles about the noise generated by three turbines built within 425 meters of his house.

Doctors and acoustics experts from the U.S. to Australia report a raft of symptoms that they blame on wind turbine noise, including sleep disturbance, headaches and vertigo. Dr. Nina Pierpont, a pediatrician in Malone, N.Y., has studied 36 people affected by wind turbine noise since 2004 at her own expense. The people she interviewed were widely dispersed; they lived

in the U.S., Canada, England, Ireland and Italy. She found that the collection of symptoms she calls "wind turbine syndrome" disappeared as soon as people moved out of their noise-affected homes and Into new locations at least five miles from any turbines.

Across the border, Ontario-based orthopedic surgeon Dr. Robert McMurtry has been researching wind turbine noise for the past 18 months. Dr. McMurtry, a fellow of the Royal College of Physicians and Surgeons of Canada, counts more than 100 people in Ontario he believes are experiencing adverse effects from turbine noise. "It has compromised their health," he says.

The wind lobby has publicly rejected these claims. In December, the American Wind Energy Association in conjunction with the Canadian Wind Energy Association, issued a report titled "Wind Turbine Sound and Health Effects: An Expert Review Panel." It declared: "There is no evidence that the audible or sub-audible sounds emitted by wind turbines have any direct adverse physiological effects." It also suggested that some of the symptoms being attributed to wind turbine noise were likely psychosomatic and asserted that the vibrations from the turbines are "too weak to be detected by, or to affect, humans."

Yet the report also noted that in "the area of wind turbine health effects, no case-control or cohort studies have been conducted as of this date." True enough-but it means there are no studies to prove or disprove the case. It also says that "a small number of sensitive people" may be "stressed" by wind turbine noise and suffer sleep deprivation. But who gets to define "sensitive" and "small number"? And if turbine noise and sleep disturbance aren't problems, then why are people in so many different locations complaining in almost identical ways? Such questions are only going to be pressed with more urgency in the future.

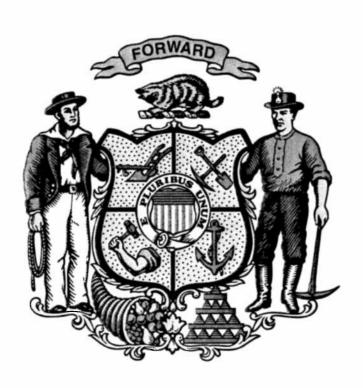
By 2030, environmental and lobby groups are pushing for the U.S. to produce 20% of its electricity from wind. According to the Department of Energy, meeting that goal will require the U.S. to have about 300,000 megawatts of wind capacity, an eightfold increase over current levels. Installing tens of thousands of new turbines inevitably means they'll be located closer to populated areas.

The health effects of low-frequency noise on humans are not well understood. The noise in question often occurs at, or below, decibel levels that are commonly considered a public nuisance. And detecting low-frequency noise requires sophisticated acoustic gear. For all of these reasons, this issue should be investigated. If policy makers are serious about considering all of the impacts of "green" energy, then an impartial, international study of the effects of wind turbine noise should be undertaken without delay.

Mr. Bryce is the managing editor of Energy Tribune. His fourth book, "Power Hungry: The Myths of 'Green' Energy and the Real Fuels of the Future," will be published in April by PublicAffairs.

Web link: http://online.wsj.com/article/SB100014240527487042...

I affirm that these comments are true and correct to the best of my knowledge and belief. Curt Hilgenberg



Submitted: 7/5/2010 6:02:57 PM

CKule 10-057

COMMENTS FILED ELECTRONICALLY IN

Wind Siting Rules

Commentor Information:

Name: Curt Hilgenberg Address: 7312 Holly-Mor Rd

City: Greenleaf State:WI Zip:54126

Comment:

April 16, 2010 by Bentek Energy LLC for the Independent Petroleum Association of Mountain States

Summary:

This new report from Colorado's natural gas industry says increased use of wind energy indirectly results in raised pollution levels produced by some coal-fired power plants along the Front Range. The report recommends curbing the use of wind energy during the next one or two years to levels that match power output at existing natural gas-fired power plants -- and building more natural gas plants in the long term. The introductory sections of the report are provided below. To access the full document click on the link at the bottom of this page.

Introduction

Sometimes things are not what they seem. Nowhere is this more evident than in the realm of state and federal energy policies. In 2004, Colorado became the 17th state to adopt renewable energy standards when voters passed Amendment 37. Colorado reaffirmed its commitment to wind and solar energy in 2007 when the state legislature passed HB 1281, increasing the requirement for utilities to purchase renewable energy by 100%, and by adopting the Climate Action Plan in which renewable energy plays a central role in the state's strategy of reducing "greenhouse gas emissions by 20% below 2005 levels by 2020."1 The expected environmental benefit of these measures is perhaps best summarized in this quote from Environment Colorado:

"Smog and air pollution continue to plague much of Colorado and part of the problem is caused by coal-fired power plants. Requiring a modest 10 percent of our electricity to come from renewable energy sources is equivalent to eliminating the pollution from 600,000 cars per year, thereby reducing smog and easing costly health problems."2

According to advocates, renewable energy will not only be a major tool to reduce our carbon output, but also, by displacing coal and natural gas, renewable energy will reduce smog and other air pollution, presumably by reducing sulfur dioxide (SO2) and nitrous oxides (NOX), principal components of ozone and smog.

This report, sponsored by the Independent Producers Association of Mountain States, concludes that the emissions benefits of renewable energy are not being realized as planned based on examination of four years of Public Service Company of Colorado (PSCO) operational history. Integrating erratic and unpredictable wind resources with established coal and natural gas generation resources requires PSCO to cycle its coal and natural gas-fired plants. 3 Cycling coal plants to accommodate wind generation makes the plants operate inefficiently, which drives up emissions. Moreover, when they are not operated consistently at their designed temperatures, the variability causes problems with the way they interact with their associated emission control technologies, frequently causing erratic emission behavior that can last for several hours before control is regained. Ironically, using wind to a degree that forces utilities to temporarily reduce their coal generation results in greater SO2, NOX and CO2 than would have occurred if less wind energy were generated and coal generation were not impacted.

An analysis of the Electric Reliability Council of Texas (ERCOT), which also operates under a mandate to use renewable energy, validates the emissions findings for PSCO. The underlying problem is the same for both PSCO and ERCOT: the generation capacity of wind resources has become too large relative to the capacity that is available from coal and natural gas facilities. Natural gas-fired combustion turbines and combined-cycle facilities are designed to accommodate cycling. Because gas resources are insufficient to offset all of the wind energy produced in PSCO and ERCOT, coal units must be cycled to counterbalance the amount of wind that cannot be offset by natural gas. As a result, when the wind energy is generated at a high enough rate, PSCO is forced to scale-back generation from its coal-fired resources. But, coal equipment is not built for cycling. Coal boilers are designed to be operated as a base load resource - in other words, to operate at a consistent output level all the time. Cycling causes coal units to operate less efficiently and reduces the effectiveness of the environmental control equipment, substantially increasing emissions.

The results of this study help explain why PSCO's coal-fired plants located in the Denver non-attainment area have experienced an increase in SO2, NOX and CO2Figure I-1 over the past few years, below shows the change in emissions

generated at the plants in proximity to the Denver non-attainment area - Valmont, Arapahoe, Cherokee and Pawnee, and the Comanche plant located outside of Pueblo. Between 2006 and 2009 despite the introduction of over 700 MW of wind energy, all of the Denver area plants except Cherokee show higher levels of SO2, all show higher levels of NOX and all but Pawnee show higher levels of CO2. The Cherokee plant switched to a lower sulfur coal in 2008, thus, even the lower SO2 readings at that plant cannot be attributed to the benefits of wind energy. Furthermore, during the 2006-to-2009 period, generation from the non-attainment area plants fell by over 37%, which makes the increase in emissions even more significant particularly in light of the EPA's announced intent to mandate tighter restrictions on SO2 and NOX emission levels by 2011.

The results also suggest that the problem will worsen over time unless mitigation measures are taken. The emission issues documented in this report are evident because PSCO has approximately 1,100 MW of wind capacity. Under the existing Renewable Portfolio Standard (RPS) and the current Integrated Resource Plan (IRP), wind capacity is anticipated to grow by a minimum of 100 MW annually through 2020. Moreover, the Colorado state legislature recently increased the RPS to 30% of sales by 2020, which will force PSCO to add even more wind capacity to its system. Unless the additional wind capacity is coupled with significantly more gas capacity, a reduction in coal capacity, or a combination of the two, the higher RPS will drive SO2 and NOX and possibly CO2 emissions higher, further exacerbating the ozone non-attainment area problems for the Front Range of Colorado.

There are national implications as well. Congress and the Obama administration are considering a national RPS. Before such a national standard is implemented, there is a compelling need to better understand where intermittent sources of energy such as wind can be integrated with existing nuclear, coal and natural gas capacity without producing cycling-induced emissions problems. The study's findings relative to ERCOT in this respect are not encouraging. ERCOT, which has one of the nation's largest natural gas-fired generation bases, acquires only about 23% of its energy from natural gas between the hours of 12:00 am and 8:00 am. Consequently, when wind comes online in ERCOT during the early morning hours, coal plants are forced to cycle. As cycling of coal plants is problematic in ERCOT, it is very likely that emissions will increase virtually everywhere else unless natural gas-fired generation is added simultaneously with wind.

Report Organization

This report is organized as follows:

- o Chapter II provides an overview of PSCO's generation capacity and utilization, basic data and analysis describing the various utilities and fuel sources that generate power in the state.
- o Chapter III describes why coal plants are cycled, and what happens as a result.
- o Chapter IV examines two specific "wind events," quantifying the emissions and the implications of each, as well as how PSCO handled these events.
- o Chapter V estimates the total incremental emissions that occurred as a result of using wind energy in the PSCO territory for 2008 and 2009.
- o Chapter VI describes the interaction between wind, coal and natural gas in ERCOT, showing how the same dynamics evident in PSCO's territory have emerged as the magnitude of wind generation has grown.
- o Chapter VII examines the emissions implications of one possible mitigation measure: retiring Cherokee and Valmont coal fired plants and replace their generation with power produced from either the existing or new gas-fired facilities.
- o Chapter VIII draws conclusions and suggests several recommendations regarding mitigation measures that might be implemented to improve the impact of wind on the PSCO system.

Data Sources

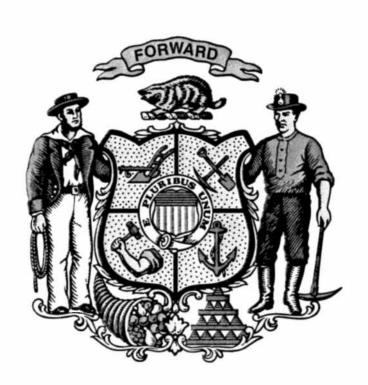
This report is built on a variety of publicly available primary and secondary data sources. The general descriptive information generally comes from basic Energy Information Administration databases including Forms 860, 861 and 423; the Federal Energy Regulatory Commission Form 1; PSCO documents, including their annual 10K financial report, and other reports available on the PSCO public website.

The core of the analysis is based on detailed primary information reported to the Federal Energy Regulatory Commission (FERC) and the U.S. Environmental Protection Agency (EPA) Page 12 of 77 by PSCO. FERC Form 714 data provides hourly load generation for operational control areas such as that of PSCO. Additionally, the Continuous Emissions Monitoring System (CEMS) of the EPA is the source of boiler-specific hourly generation and emissions data. This information is relied on heavily for the analysis of the July 2, 2008, and Sept. 28-29, 2008, wind events discussed in Chapter IV. Finally, ERCOT requires generators to publish on a 15-minute basis their generation by fuel and type of facility, enabling analysis of the interaction between wind, coal and natural gas combustion turbines and combined-cycle facilities in the ERCOT region. These data provide the analytical basis for the analysis of ERCOT operations in Chapter VI.

To access the full document, click on the link below.

- 1 Colorado Climate Action Plan http://www.coloradoclimate.org/
- 2 Environment Colorado website, http://environmentcolorado.org/envcoenergy.asp?id2=22373
- 3 As used in this report, the term cycling refers to sudden increases or decreases in power generation output. Cycling occurs for a variety of reasons including making way for alternative generation, maintenance and/or equipment failure or sudden changes in load size.

I affirm that these comments are true and correct to the best of my knowledge and belief. Curt Hilgenberg

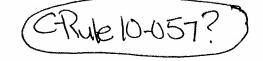




Dedicated to making sure that wind turbines get sited the RIGHT WAY.

July 5th, 2010

Sandy Paske, Secretary to the Commission Public Service Commission PO Box 7854 Madison, WI 53707



RE: Wind Siting Docket 1-AC-231, PSC Chapter 128

Dear Ms. Paske:

The Coalition for Wisconsin Environmental Stewardship (CWESt) has been integrally involved in the debate surrounding wind turbine siting in Wisconsin for several years. We are the only statewide organized group representing those people directly affected by wind turbines being sited in their neighborhoods. We would like to make several important comments on the proposed wind siting rules.

1 – The process to date has not been set up to get a fair and balanced result. The Commission appointed a Wind Advisory Council that was heavily weighted toward members who were active in supporting wind projects. The Commission ignored the request of the Wisconsin Counties Association for its incoming Chairman to be selected to serve on the Council, and instead picked someone who was not recommended. One of the persons selected to represent the "landowners living adjacent to or in the vicinity of a wind turbine project lives ¾ of a mile away from a project. It is doubtful that many CWESt members would be concerned about wind turbines if they were only dealing with turbines sited at that distance. This person cannot realistically represent their point of view. The two public members of the Council are both heavily and professionally involved in the wind industry, thus making them poor representatives of the public.

Now that voting has begun on the Council, our "side" can expect no more than 4 votes out of 15. This is hardly the outcome anticipated by the Legislature when they set up the Council under Act 40.

2 – One can't help but wonder precisely what problem we are trying to address by placing these wind turbines so close to rural residential homes. The Clean Energy Jobs Act was defeated in the Legislature without even a vote being cast. The current 10% Renewable Portfolio Standard can easily be met with a more common sense set of setbacks and standards that actually protect the health and assets of rural communities. Wisconsin's wind resource is approximately one-

half as robust as the winds found just to our west in the Dakotas. It seems to us that the most cost effective means to attain a 10% RPS would be to import some high quality wind power, not build inefficient turbines here in the state and then stick the ratepayers with the higher costs.

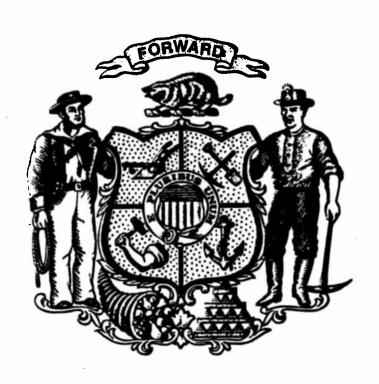
3 – The PSC should understand that all members of the community where an industrial wind project is located are "participants". Many times the landowners signing the wind turbine easements live further from the turbines than the so-called "non-participating" landowners. Under Act 40, local governments' attempts to address concerns in the community would be severely limited. Thus the rules must allow the local government to require some sort of property value guarantee.

The studies are conclusive: there is a 40% drop in property values for those homes located adjacent to an industrial wind project. This is not surprising. Most people who choose to live in the countryside have exchanged the convenience of urban living for privacy and quiet. Turbines disrupt that benefit. Fewer buyers will want to live in a house that has neither the city conveniences nor the rural peace and quiet. Therefore the home values plummet.

Placing a reasonable setback of 2500 feet from a property line will alleviate a large part of this problem. The turbine developers will then be required to negotiate with those landowners who are closer than 2500 feet from their proposed turbine site. CWESt has no problem with landowners being able to sell an easement for a turbine placement closer than 2500 feet. Currently, the PSC process has cut these neighboring landowners out completely – they do not benefit from the project economics and they suffer the loss of their property rights. This is clearly a "taking" and the PSC has a duty to protect citizens from this appropriation of what is often their life's savings.

- 4 The health effects of living near giant wind turbines are not yet well understood. Some studies show that repeated noise levels of 45 dBA can have adverse consequences. These studies, done by agencies such as the World Health Organization, have been done most frequently by airports, where the occurrence of the noise is MUCH less frequent than with the turbines. To build the turbines first and wait for the studies is irresponsible. Current setbacks and noise limits are not supported by any scientific study and have no rational basis. The numbers have clearly been selected for the convenience of the developers. Even Vestas, a turbine manufacturer, recommends using ambient background noise levels plus something like 5 dBA (similar to the Calumet County Wind Ordinance). We view this as much more appropriate for protecting the health and safety of Wisconsin residents.
- 5 The PSC was founded on the notion of protecting the little guy from powerful interests. Yet the rules contain no consumer protections for those landowners considering signing an easement, who often get a very one-sided "pitch" from wind developers. The rules should allow local governments to require community notice before individual contracts are signed and should give landowners a 90 day "cooling off" period in order to reconsider their action.

In conclusion, CWEST finds that the proposed draft rules are completely inadequate to protect the health, safety, and property rights of those living near proposed industrial wind turbine developments. We urge the Commission to amend these rules so that they reflect the historic role of the PSC as a protector of the ordinary citizen.





An explanation of a 35 dBA recommendation for the Wind Siting Council Doug Zweizig

As had been pointed out, it is not the mission of the Wind Siting Council to promote the development of wind energy systems in Wisconsin, though it may be the individual interest of Council members. I would state my intention for the Wind Siting Council to be broadly protective of the health and welfare of Wisconsin residents and supportive of wind energy development that will gain community acceptance. I am also mindful of the requirement from Act 40 that:

The subject matter of these rules shall include setback requirements that provide reasonable protection from any health effects, including health effects from noise and shadow flicker, associated with wind energy systems.

"Any health effects" gives the Public Service Commission the responsibility to be broadly protective of health, not just to address health effects that are verified as the direct results of exposure to wind turbine noise.

Since I am not in favor of the sound standard favored by the majority (50 dB day/45 dB night) and have proposed a standard of 35 dB day/30 dB night and have said that I had a basis for this standard, I feel obligated to provide that basis. (I would be very interested to learn the reasoning from someone who supports the higher standard.)

This is something like the process I used to determine my position:

Decide if there is a problem with the sound from wind turbines

How do we know that sound from large wind turbines might be a problem? Evidence that people are disturbed by the sound level produced by large wind turbines sited too close to homes is found in the reports of persons suffering their effects that can be found on the docket and in hearings testimony. It is found in the experiences reported to the Council by Larry Wunsch and Gerry Meyer. I have heard it myself in Gerry Meyer's farm yard during the day—and reports are consistent that the sound is a particular problem at night, and that daytime sounds are mild in comparison (See, for example, Pedersen & Waye, "Wind Turbines—low level noise sources interfering with restoration?," *Environmental Research Letters*, 3, January-March 2008.). We have reports from a variety of wind turbine installations that the symptoms that seem linked to the turbines go away when people leave the area, only to return when they come home again.

So it is not necessary for us to turn toward scientific literature to determine if there is a problem (and Act 40 does not limit the Wind Siting Council to consideration of scientific literature). Residents have been complaining for some time. In this state, we have instances of people abandoning their homes because the conditions are intolerable, and Wisconsin has hundreds of families living proximate to wind farms who could be studied if only we had the interest or the will (See the epidemiologist Carl Phillips' report on the docket).

The answer seems to be "Yes, the sound should certainly be under suspicion as a problem," and it would seem prudent ("reasonable") to be cautious in siting wind turbines until we are reasonably certain that our decisions will not cause harm.

Those who want to downplay the effects of wind turbine sound will point to negative attitudes towards wind turbines as the explanation for being affected by sound. There are two counters to that argument. The first is that the data regarding attitude and annoyance from sound to date have shown only that the two are related. We do not know which comes first, annoyance or attitude, and we certainly cannot say that one causes (or even influences) the other. The second counter to the argument is the experience at Vinalhaven, an island in Maine. This island wanted an independent source of power, and islanders were eager to have three 1.5 mW turbines installed, but the problems were immediately evident when the turbines were turned on, so positive attitude toward wind turbines did not prevent islanders from experiencing the negative effects (see http://mainebusiness.mainetoday.com/story.php?hcode=pph&id=311094).

Decide if it makes a difference

A question to ask is whether there is an important difference between the two standards, a difference that would affect the lives of persons living adjacent to large wind turbines. I have based my recommendation in part on the level of the background sound found in rural areas. Most estimates of ambient sound in rural areas are around 20-25 dB at night. This would make a level of 45 dB to be at least 20 dB louder. Given the logarithmic scale used for decibel measurement, that would mean a four-fold increase of sound volume, and the wind turbine noise would become the dominant sound. This is an unwarranted imposition on a neighbor from a landowner with a wind turbine. I think that anyone would be awakened and disturbed by such an increase in sound volume, particularly those who have chosen to live in a quiet rural environment. People living in

an urban area may be accustomed to nighttime sound levels of 50dB and be able to sleep just fine. However if their sound level was elevated by 20dB to 70dB, the difference would be clearly heard, and sleep disturbance would most likely occur for a significant number.

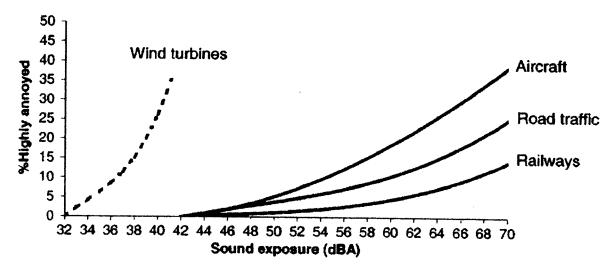
Consider what qualified persons have said

The World Health Organization's "Night Noise Guidelines for Europe," 2009 gives the following recommendation:

For the primary prevention of subclinical adverse health effects related to night noise in the population, it is recommended that the population should not be exposed to night noise levels greater than 40 dB of Lnight, outside during the part of the night when most people are in bed.

This sound level is for sound generally, and not considering what sound level would be appropriate for wind turbines. It is generally accepted, based on investigations, that the sound from wind turbines has characteristics that make it annoying at levels lower than for other environmental sounds. The following chart shows 10% of the population being "highly annoyed" at around 36 dBA, where road traffic would need to be at 58 dBA, or about 5 times as loud for the same percentage of people to be highly annoyed.

Annoyance associated with exposure to different environmental noises



Reprinted with permission from Pedersen, E. and K.P. Waye (2004). Perception and annoyance due to wind turbine noise—a dose—response relationship. *The Journal of the Acoustical Society of America* 116: 3460. Copyright 2004, Acoustical Society of America.

Found in *Public Health Impacts of Wind Turbines*, Prepared by: Minnesota Department of Health, Environmental Health Division, In response to a request from:

Minnesota Department of Commerce Office of Energy Security, May 22, 2009.

Some of the characteristics of wind turbine sound that may explain this difference have been identified. Richard Horonjeff's paper that is on the docket cites EPA guidelines that indicate a 10 dB correction for sound in a quiet rural setting and a 5 dB correction for an unfamiliar sound source, so the EPA guidelines (also adopted by ANSI) would lower a standard for conventional sound by 15 dB. Other characteristics are:

- the low frequency component of the sound (underestimated by the dBA scale),
- · its pulsating nature,
- · lack of control over the sound,
- its continually changing as wind speed and direction change over the nighttime hours, making turbine noise impossible to get "used to," and
- its duration ("the jet plane that never leaves").

These particular characteristics of wind turbine sound should lead to more conservative standards in order to be as protective as standards for more conventional sounds, so the WHO recommendation of 40 dB is probably too high for sound from wind turbines.

The Wind Siting Council has already determined to recommend an absolute noise limit, even though it is the difference in sound levels that captures the attention of a receptor. As has already been shared with the Council, Vestas has a policy that recommends relative noise limits:

Vestas recommends relative noise limits that take into account local background noise levels (where new wind turbines are sited near existing ones, already present turbine noise should not be calculated as part of the background noise). Vestas believes this type of regulation is the most effective and flexible, in that it ensures minimal noise disturbance for wind turbine neighbours while allowing turbines to be located in relatively noisy areas (areas with industry or roads, for example) that are rich in wind resources.

The monitoring of a relative noise limit is apparently feasible since such a procedure is contained in the Public Service Commission's Noise Protocol. Such a standard (at 5 dB over ambient) has been in place since 1998 in New Zealand, has just been renewed, and is supported by the New Zealand Wind Energy Association. It may be worth exploring the flexibility that would be gained from using such a relative noise limit. My recommendation for a 30 dBA sound limit at night was partly based on adding 5 dBA to the expected ambient noise level for rural areas of 25 dBA.

Much of the research we have about the effects of wind turbine sound on populations comes from Europe, where the turbines in the research studies are

considered large at 500 kW. The large turbines we are expecting now start at 1.5 mW, three times as large. "Higher towers push the rotors to heights with stronger winds than found lower down, increasing the time a wind turbine operates and increasing differences between immission levels and the background sound levels of wind-induced noise in bushes and trees, especially at night when the atmosphere is stable for part of the time." (Pedersen et al. "Response to noise from modern wind farms in the Netherlalnds," *Journal of the Acoustical Society of America*, 126 (2), August 2009, 642.)

A further reason for caution is that siting of wind turbines based on sound limits is done through sound modeling that has been found to overestimate the effects of vegation on masking sound and the ability of house walls to attenuate low frequency noise (the most disturbing component).

These considerations lead me to recommend a conservative sound limit since a local jurisdiction will not be able to make it more restrictive. Therefore, I think that the Wind Siting Council would be wise to recommend a lower decibel level. Local jurisdictions can always set a higher local standard if that is what the community wants.

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(Ruk 10-057?)

Submitted to:

Wisconsin Senate Committee on Commerce, Utilities, Energy, and Rail Wisconsin Assembly Committee on Energy and Utilities

Reference: Legislative Committee Review of PSCW Rules for Siting of Wind Energy Systems (Draft PSC Chapter 128-Wind Energy Systems)

Request by the Wisconsin Towns Association—Brown County Unit July 24, 2010

Our group, representing all of the town officials in Brown County, requests that you delay approving the Public Service Commission of Wisconsin (PSCW) wind siting standards until epidemiological studies of health complaints from Wisconsin's current wind farms are thoroughly completed.

Frequently, the point is made that there are no scientific studies which show negative effects on humans by wind turbines. The fact is there are no scientific studies which show there is no harm as well. There are no substantial controlled scientific studies done yet.

There is mounting evidence that there are likely serious negative impacts on human and animal health caused by large wind turbines. It appears it is not only reasonable to delay the issuance of wind siting standards but it would be irresponsible to not do so in light of new studies and ongoing complaints of residents in and near Wisconsin's existing wind farms.

A very important report was published March 2010 by the World Health Organization (WHO) entitled "Night Noise Guidelines for Europe" (2009) (available at euro.who.int/en/what-we-publish/abstracts/night-noise-guidelines-for-europe).

The report is based on a six-year evaluation of scientific evidence by thirty-five scientists from medical and acoustical disciplines. WHO indicated that now governments have justifications to regulate noise exposure at night. WHO sets the limit for annual average exposure to not exceed 40 decibels (dB) outside of a residence. (Note, in this request, we do not recommend a sound level for wind turbines because of the lack of controlled studies to show what effects turbines are or are not causing.)

WHO stated, "Recent research clearly links exposure to night noise with harm to health. Sleep disturbance and annoyance are the first effects of night noise and can lead to mental disorders. Just like air pollution and toxic chemicals, noise is an environmental hazard to health". WHO stated that they hope their new report will prompt governments to invest effort and money in protecting health from this growing hazard. Their report identifies a number of serious, negative health impacts.

Some of our towns were active in the review of wind turbine studies. Some of the most notable and credible of these studies have been published in the last nine months, after the issuance of Act 40.

The PSCW's draft rules discount low frequency noise levels. There are studies which have described the likely effects. This is another area where epidemiological studies are needed before wind turbine setbacks can be reasonably proposed.

Besides sleep disturbance, there are complaints of other physiological problems. It is not acceptable to ignore or minimize the significance of these impacts as just quirks of human imagination.

Also, there is evidence that existing wind farms in Wisconsin are negatively affecting farm animals. Whether it is noise or some other physical phenomena, studies and testing should be done before setting standards.

At a public meeting of the Brown County Health Department and the Brown County Human Services Committee, reputable medical and health experts stressed the importance of epidemiological studies to determine the true nature of health impacts of wind turbines.

The State Board of Health pointed out that the lack of funding is a hurdle. But a conviction to do the right thing should prompt the legislature to pursue the money issue. The U.S. Department of Energy has been providing money for wind energy research. That said, it is certainly appropriate for the wind developers and their associations to offer funding for independent studies since such studies would allow them to site wind turbines based upon adequate science and should reduce future liability and litigation expense. Electric utilities should have a stake in this effort as well. This is an opportunity to involve the University of Wisconsin research capabilities in both human health and animal health.

It appears that Act 40 does not set a deadline for completing the siting rules. If one or two years were used to study the existing wind farms while delaying any new installations, the developers would still have time to help utilities meet their 10% RPS by 2015.

Our towns implore your committees to not ignore the evidence of potentially serious health impacts and to not set standards until they have done the obvious and reasonable step of studying the health impacts of existing wind turbine installations in Wisconsin. We believe our request aligns with the both the legislature's and the PSCW's responsibility to protect the citizens of Wisconsin.

Norbert Dantinne

County Unit Chairperson

Milion

PROBITY Consulting, LLC

Glen R. Schwalbach, P.E., NSPE President

1090 Moonriver Dr. De Pere, WI 54115 Cell: 920-680-2436 Office/Home: 920-532-6330 glenschwalbach@netzero.com





Pule 10-057?

Commissioner Lauren Azar
Opening remarks regarding Wind Siting Rule
August 19, 2010

This is one of the most difficult decisions I've made during my tenure as commissioner. While some issues that need to be resolved are easy, others are not.

Before I begin I'd like to thank the members of the wind siting council who worked hard to develop the recommendations before us, and the commission staff, they've done a stellar job with drafting this rule and staffing the council.

Let me say from the start, based on the record of this case, I believe the health of a small portion of the population could be adversely affected by wind turbines, primarily through noise and vibration.

Frankly there is a strong suggestion that these adverse affects could be serious for a small percentage of folks.

Unfortunately we don't know precisely why these people are affected, we don't know what percentage of the population is affected and we don't have a correlation between the levels between the emissions and the adverse affects.

In short, there are a lot of unknowns. I will be recommending that we ask the wind siting council to investigate and make recommendations on several issues. Though our information is not currently complete, I believe there is a good reason to pass a rule now, recognizing it will be a work in progress.

My goal today is two fold; protect the public while simultaneously removing barriers for wind development. While some may think this balance is impossible, I do not.

Indeed the more information that we as a commission obtain, the greater likelihood that we can meet both ends of that goal. Accordingly, as we gather more information, I believe the commission can and should refine these rules.

Make no mistake. As wind energy is developed in Wisconsin, it will affect the residents living around the turbines. This commission cannot eliminate all of those effects. All of us bear burdens for the good of our society, but some bear burdens greater than others.

It's sobering to have to determine the amount of burden that may be placed on a community. Based on our dialog today it may seem that we make these decisions with ease. Let me assure you that these are heart wrenching decisions. We make these decisions recognizing the sacrifices that will follow.

Indeed, I have heard from people living in existing wind energy developments who have—who state they have been adversely affected and we hope that these rules will address the issues that they have raised in future developments.

While reviewing the proposal rule, I was keenly aware of the distinctions between preventing the potential harm and mitigating that harm.

My recommendations seek to prevent the harm for the vast majority of the general public.

First, these rules will establish standards that must be complied with or there will be consequences. Additionally my hope is we develop rules that recognize that some people are particularly sensitive to the emissions from wind turbines. In these cases, the developer must mitigate that harm, or at least I believe so.

Should these mitigation techniques fail in these rare circumstances I believe we should pass rules that protect these particularly sensitive residents.

If after mitigation the wind energy system is causing significant and verifiable adverse health [inaudible] I will be proposing that the developer be required to purchase the protected party's home at market value.

In conclusion I want to address two critiques that have been made about the process of this rule making.

First, there are allegations that the council members that were appointed do not fit the profile mandated by the legislature. Simply, I disagree with that allegation.

Second, several parties have asked the commission to delay promulgating these rules so that further information can be developed. I found there is a dearth of information on some of these issues which makes policy making on those issues difficult.

However, according to one of the briefs, there is around 600 megawatts of wind waiting to be developed and development is halted until this rule is completed.

While I like to make decisions based on complete information, it is unclear when we will receive that information, hence, I think we need to develop the rules that include safeguards addressing some of the unknowns while simultaneously allowing responsible wind projects to be developed.

I believe we can develop rules that accomplish both.





Public Service Commission of Wisconsin

Eric Callisto, Chairperson Mark Meyer, Commissioner Lauren Azar, Commissioner 610 North Whitney Way P.O. Box 7854 Madison, WI 53707-7854

August 26, 2010

(CRule 10-057?)

The Honorable Robert L. Cowles The State Senate State Capitol, Room 319 South Madison, WI 53702

Re:

Proposed Wind Siting Rule (PSC 128)

Dear Senator Cowles:

Pursuant to your request of July 27, 2010, I have enclosed an energy impact report for the proposed wind siting rule (PSC 128). If you have any questions after your review of this report, please do not hesitate to contact me or Bob Norcross, Administrator of our Gas and Energy Division.

Sincerely

Erid Callisto Chairperson

cc: The Honorable Jeffrey Plale The Honorable James Soletski

Telephone: (608) 266-5481 Fax: (608) 266-3957 TTY/TextNet: In Wisconsin (800) 251-8345, Elsewhere (608) 267-1479

Home Page: http://psc.wi.gov E-mail: pscrecs@psc.state.wi.us



Public Service Commission of Wisconsin

Eric Callisto, Chairperson Mark Meyer, Commissioner Lauren Azar, Commissioner

610 North Whitney Way P.O. Box 7854 Madison, WI 53707-7854

August 26, 2010

TO:

The Honorable Robert L. Cowles

The State Senate

FROM:

Eric Callisto, Chairperson

Public Service Commission of Wisconsin

RE:

Proposed Wind Siting Rule (PSC 128)

This analysis is provided in response to your request of July 27, 2010, which seeks an energy impact report on the Public Service Commission's (Commission) proposed wind siting rule (PSC 128). I note that you make your request under Wis. Stat. § 227.117, which is actually concerned with administrative rules proposed by agencies *other* than the Commission. In any event, I am more than willing to provide you with the Commission's input on the potential cost and reliability impacts of the proposed wind siting rule.

As you know, Wisconsin's current regulation of non-utility wind energy installations of less than 100 megawatts is comprised of a varied patchwork of local ordinances. These have proven problematic. The ordinances vary significantly from jurisdiction to jurisdiction, some operate as *de facto* moratoria on wind energy of any kind, and at least one such ordinance has been struck down in court. The result has been confusion among wind energy developers and manufacturers, controversy for local governments, disillusionment for landowners, and a marked slowing of wind energy development throughout the state.

In recognition of that state of affairs, the Legislature passed and Governor Doyle signed into law 2009 Wisconsin Act 40, which directs the Commission to promulgate rules that specify the restrictions a political subdivision may impose on the installation or use of a wind energy system. The rules promulgated under Act 40 will create a uniform ceiling of standards to guide the local regulation of wind siting, operation, and decommissioning for projects of less than 100 megawatt capacity.

While the Commission's wind siting rule will increase regulatory certainty and likely assist in avoiding project delays, it does not directly affect the cost or reliability of electric generation, transmission, distribution or fuel used for generating electricity. The primary effect of the proposed rule is to provide a greater degree of predictability in wind energy planning and siting, while protecting the health and safety of those living and working in close proximity to the projects. The rule will include setback requirements, noise and shadow flicker standards, and mechanisms that give non-participating landowners a stake in wind energy projects sited in their area. The rule will act as a ceiling of regulation that local ordinances cannot be more restrictive than, as contemplated by Act 40.

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Home Page: http://psc.wi.gov E-mail: pscrecs@psc.state.wi.us The Honorable Robert L. Cowles Page 2

That is, the proposed rule is primarily a set of *siting* standards, not a mandate or driver of additional renewable energy generation. It is the state's renewable portfolio standard (RPS) that drives renewable energy generation for Wisconsin utilities and ratepayers, and Act 40 and these rules leave the RPS unchanged. Wind energy systems will be built in Wisconsin only if a developer or utility believes there is a site with adequate resources and a market for the energy produced that will allow an adequate recovery of project costs and provide for a sufficient return on investment. Siting rules alone will not appreciably change the amount of renewable energy brought to Wisconsin ratepayers. If anything, by increasing the predictability and uniformity of siting standards throughout the state, the proposed rule may actually lower project development costs for wind energy systems. And to the extent renewable energy from those projects is ultimately delivered to Wisconsin ratepayers, the cost of that energy could be lower than what it otherwise would have been.

Please feel free to contact me, or Bob Norcross, Administrator of our Division of Gas and Energy, if you have additional questions.





WISCONSIN LEGISLATURE

P.O. Box 7882 • Madison, WI 53707-7882

September 15, 2010

(-Rule 10-057?)

Senator Jeff Plale, Chair Senate Committee on Commerce, Utilities, Energy and Rail Room 313 South, State Capitol Madison, WI 53707-7882

Dear Chairman Plale,

As you know, the Senate Committee on Commerce, Utilities, Energy and Rail has formally received from the Public Service Commission PSC 128, the proposed wind turbine siting rule prompted by the enactment of 2009 Wisconsin Act 40. As representatives of citizens who have expressed several concerns about PSC 128, we respectfully request a public hearing while the Committee maintains its jurisdiction over the rule.

Since the Wind Turbine Siting Council released its recommendations to the PSC earlier this summer, many of our constituents have expressed concerns over the various provisions contained within. Generally, these concerns have centered on 1) the impact on local property values near where a wind turbine is proposed to be sited, and compensation of these nonparticipants; 2) the setbacks from nonparticipant property lines and homes; and 3) shadow flicker.

As Senate Bill 185 was deliberated, legislators were given the assurance that the Wind Turbine Siting Council would be a consensus-driven process. Unfortunately, that has not been the case. Instead, clear divisions over wind energy siting emerged on the Council, with one side winning and the other side losing. This is reflected in the identical 11-4 votes on all of the most important issues surrounding PSC 128. This may represent majority rule, but it does not represent consensus.

This lack of consensus demonstrates that further discussion of PSC 128 is urgently needed, and we appreciate your consideration of our request to grant a public hearing.

Sincerely,

Joe Leibham

JOE LEIBHAM

State Senator 9th District Randy Hopper

State Senator 18th District





WISCONSIN STATE LEGISLATURE

P. O. Box 7882 Madison, WI 53707-7882

September 16, 2010

Senator Jeff Plale Chairman, Senate Committee on Commerce, Utilities, Energy and Rail PO Box 7882 Madison, WI 53707-7882

Chairman Plale:

We are writing today to respectfully request that you schedule a public hearing on Clearinghouse Rule 10-057, which was recently referred to Senate Committee on Commerce, Utilities, Energy and Rail.

As you know, CR 10-057 implements 2009 Act 40, which relates to the siting of wind energy systems in Wisconsin. We have received many contacts from our constituents regarding their concerns over this administrative rule.

The siting of wind energy systems in Wisconsin is a very controversial and contentious issue in many parts of the state, and we believe it would be prudent for the committee to utilize its oversight authority in order to gather more information regarding the rule and to explore ways in which the rule may be improved before final promulgation is completed.

Thank you for your consideration of our request, and we look forward to your response.

Sincerely,

Sen. Robert Cowles

Sen. Neal Kedzie

Sen. Sheila Harsdorf

Sen. Alan Lasee





Al Ott

State Representative • 3rd Assembly District

September 21, 2010

Representative Jim Soletski Chairman, Assembly Committee on Energy & Utilities 307 West, State Capitol Hand-Delivered Senator Jeff Plale Chairman, Senate Committee on Commerce, Utilities, Energy & Rail 313 South, State Capitol Hand-Delivered

Chairmen Soletski and Plale:

I would like to take this opportunity to respectfully request your consideration in scheduling a public hearing on Clearinghouse Rule 10-057, which was recently referred to your Committees for legislative review.

Clearinghouse Rule 10-057 implements the provisions of 2009 Wisconsin Act 40, which relates to the establishment of statewide standards for the siting of wind energy systems.

As you know, the development of wind energy systems in Wisconsin is a highly controversial and contentious issue in many parts of the state – including my district in Northeast Wisconsin. While there will always be fundamental disagreements as to if and where wind energy systems are appropriate in Wisconsin, Act 40 has – to a certain extent – made those disagreements a moot point.

Act 40 is the result of a policy decision made by the legislature to facilitate the development of wind energy in Wisconsin by simplifying the process to site wind turbines in this state. I opposed this effort on the grounds that it stripped the authority of local government to truly take into account local conditions and circumstances when faced with the potential of a wind energy system coming to their communities.

We are now forced to deal with the nuts-and-bolts implementation of the legislature's policy decision via Clearinghouse Rule 10-057. Given the complicated and highly contentious nature of this issue, I believe it is absolutely necessary for your respective Committees to utilize the legislative oversight authority provided by law to hear directly from the people who will be impacted by the provisions of this administrative rule.

The people of Wisconsin deserve the opportunity, provided under the process of legislative review of administrative rules, to make their case for and against Clearinghouse Rule 10-057

directly to the legislature. And specifically, to argue their positions to the Committees that have the direct authority to seek out ways in which to improve this rule prior to final promulgation.

While my constituents know I will not take sides in the local battles taking place over the siting of wind turbines in my district, I cannot disagree with those who have contacted me recently to share their concerns with the process of developing Clearinghouse Rule 10-057. They argue the process has been flawed. One only needs to examine the Minority Report of the Wind Siting Council to get a clear sense of the validity of that sentiment.

As an aside, many who have supported Act 40 and the subsequent administrative rules have compared this process to that of the Livestock Facilities Siting Law and rule package. As a member of this body who worked closely on that issue, I must respectfully disagree. Livestock siting went through a very deliberative and lengthy process with abundant opportunities for, and acceptance of, public input. We took the time necessary to get the best possible product for agriculture, the environment, and Wisconsin's citizens. Today, we are seeing the results of those efforts with environmentally responsible growth of our dairy and livestock industries. You have the chance to use livestock siting as a model moving forward.

You have the opportunity and, I might argue, the obligation to utilize your authority to ensure this rule not only meets the intent set out in Act 40, but also serves to protect the people of Wisconsin.

Thank you for your consideration of my request. I look forward to your response.

Sincerely,

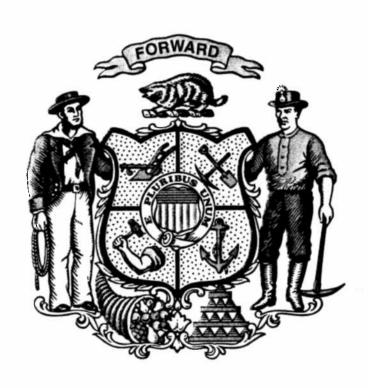
Al Ott

State Representative 3rd Assembly District

cc:

Assembly Committee on Energy & Utilities

Senate Committee on Commerce, Utilities, Energy & Rail



Dan Kapanke

Wisconsin State Senator - 32nd District



September 27, 2010

The Honorable Jeffrey Plale State Capitol Room 313 South Madison, WI 53707

Dear Senator Plale,

I am sending this letter to respectfully request a public hearing on Clearinghouse Rule 10-057 (CR 10-057) proposed by the Public Service Commission of Wisconsin relating to the siting of wind energy systems.

CR 10-057 will greatly influence individuals, businesses, communities, local municipalities, land use plans, home and property values, and resources. Consequently, it is my hope that the Senate Committee on Commerce, Utilities, Energy, and Rail holds a public hearing in order to discuss CR 10-057 in its entirety, ensure all voices are heard, and determine appropriate action.

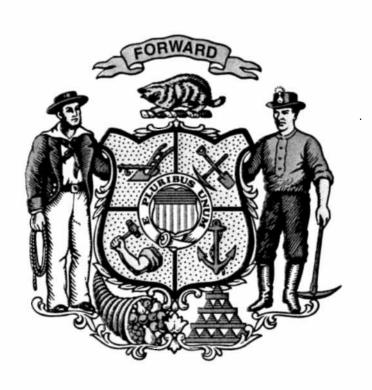
Thank you in advance for your attention to this matter. If you have any questions, or would like to discuss this matter further, please contact my office at 266-5490.

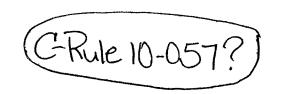
Sincerely,

Dan Kapanke

Senator 32nd District

Cc: Committee Members of Senate Committee on Commerce, Utilities, Energy, and Rail





Dear Legislator,

Is anyone listening? Does anyone care? Please, please hear my small voice.

Just think...if a 50 story (500') high wind turbine were to be sited by your home in town...a 3.1 setback would mean that it could be as close as 1550'. If each home lot had 100' frontage...then that turbine could be as close as 15.5 lots from your home. That would be 2-3 blocks from your home. Imagine that!

If a 30 story (300') high wind turbine were to be sited by your home in town...a 3.1 setback would mean that it could be as close as 930'...9.3 home lots from your home...1-1/2 blocks from your home. Shocking!

Do you think your property values would be the same if those turbines were within 1-3 blocks of your home? Commercial factories with spinning blades causing audible and inaudible sound, turbulence, wake, flicker, etc.

Would you call that turbine so very close to your home a wind energy system...or would you call it a commercial factory that has caused a GREAT IMPACT on your property and way of life?

There are only two buildings in the State of Wisconsin that are taller than 50 story turbines, yet these turbines are permitted to be sited in Wisconsin...amidst precious farmland, dairy and beef animals, forage and cash crops...and humans.

And just think what it would be like to have 100 turbines headed toward where you live? 100 turbines! That's what is happening to the towns of Glenmore, Holland, Morrison and Wrightstown.

In the country, the ground level noise and wind is NOT THE SAME as the noise and wind experienced at the hub of the turbine. During the evening and night in our rural area, there aren't combines, tractors, or constant vehicles on the road, etc. And during the day there aren't combines, tractors, and constant vehicles running either. Most farmland crops sit quietly for 6 weeks to 3 months before harvest. So it's pretty simple to understand why the turbines are heard during the day and night.

The dBA levels approved by the PSCW are absurd. They are also the least restrictive in the world...with the least amount of setback in the world. Rural areas aren't as loud as urban areas, so why would dBA levels for urban areas be considered appropriate for quiet rural areas? WHY IS THAT? Perhaps because turbines would have to be set back further, at least one mile, and then none could be sited in a rural area such as Glenmore.

Have you heard the comments from the wind companies that turbines are as quiet as a whisper in your ear? Really? What human exists or sleeps with someone whispering in their ear all day or night? And the other one...that turbines are as quiet as a running refrigerator...again...who sleeps with a running refrigerator?

In the Town of Glenmore, we live and/or work within one-eighth (or less) to one quarter of a mile from each other. One-eighth of a mile is 660' (6 ½ 100' home lots from your home) and one quarter of a mile is 1,320' (13 100' home lots from your home). As you can see, for a rural area, we are quite populated. We are not the open plains. The proposed setbacks from turbines do not protect humans, places of employment, or properties as suggested by the proposed PSCW rules.

Speaking of humans...did you know that occupied barns...where employees work 5-15 hours per day are not covered as inhabited structures? NOT COVERED! These are occupied places of employment with anywhere from two to 15 (or more) employees! Are they not covered because if setbacks had to include occupied barns...it would prohibit siting wind turbines in these rural towns? The farmers are not protected by the proposed PSCW rules.

In a rural area...aerial crop dusting/spraying is not covered in the siting rules. WHAT? Cash crops need aerial dusting/spraying 3-4 times per year. Sometimes forage crops may need aerial dusting/spraying. Both the Wisconsin and the Illinois Agricultural Aviation Associations in the interest of pilot safety, refuse to make aerial applications inside a grouping of wind generators, or to farmland immediately adjacent to a grouping of wind turbines. Hmmm...will that put farmers out of business if they lose a crop? Who knows what type of crops will be grown in the next 25-30 years? Who knows what types of disease or infestation could occur in the next 25-30 years? Is that why it isn't covered... because the turbine companies would have to pay for lost crops? Crops that require aerial dusting/spraying are not protected by the proposed PSCW rules.

Real estate values won't be affected. WHO, IN ALL FAIRNESS BELIEVES THAT? Envision...a quiet, picturesque country home, surrounded by rolling fields, open sky views...and 100 turbines. Thud...that's the property owner fainting at the loss of equity. Why not implement a simple solution? Appraise the property preturbine, use comparable properties recently sold that also don't have turbines...achieve an asking price. The difference in selling price vs. asking price can be the turbine company's share to pay. This process would work no matter what the condition of the economy, because the comparables exist in that economy as well. The property owner is not protected by the proposed PSCW rules.

Have you seen adult men cry? I HAVE. I hear from them (as they have pleading looks in their eyes and tears running down their cheeks) that they have lived in Glenmore for 20 - 30 years, that they pay taxes, keep their home and property according to the ordinances and expectations of their neighbors... and now... they are having their freedom and right to live in their home and on their property in a rural environment the way a rural environment is meant to be enjoyed, compromised by commercial wind factories. I entertain that there will be illness, depression, and possibly suicides over this intrusion. The taxpayer is not protected by the proposed PSCW rules.

Rural residents know they must pay the expense to have a well dug and for all the items necessary to get that water cleanly and safely to their home and/or barns. They realize they are responsible for the cost of construction of a mound or other type of septic system, plus are required to pay to have the system cleaned out every three years. They know how vital it is to protect their wells and septic systems. Uncontaminated groundwater is VITAL. Now we are forced to permit 100 turbine sites to be dug and erected with miles and miles of access roads scraping through farmland and cable trenches being dug...all creating very probable pathways for liquid manure to travel to wells.

Because farms are larger, there is already more liquid manure being spread on less acres of farmland. Add to this, the amount of digging and trenching required for these numerous turbine factories, and it creates a hotbed for well contamination and existing areas of Karst features which are direct pathways for manure and soil runs.

Newly discovered areas of Karst features are to be reported by the turbine companies to the DNR. Manure cannot then be spread on these Karst areas which limits further the ability for farmers to spread liquid manure on already diminishing farmland. And who is going to pay to have the discovery of new Karst features monitored and reported to the DNR? Turbines cannot be sited in Karst areas...so what is the incentive for the turbine company, once they discover a Karst feature, to cease digging and stop erecting that turbine? None...because then they can't site that turbine. The property owner and residents whose wells could be contaminated are not protected enough by the proposed PSCW rules.

Rural residents understand they will be exposed to certain sights and smells...animals, manure on the roads, fermented liquid manure spread on the fields, flies, dust from the fields, etc. They expect the height of a 60' or 80' silo. And now, they are to be exposed to a new sight...40-50 story high turbines with wide and long access roads slicing through precious farmland. Imagine turbines at every view from your home. The residents expected way of life in the rural area is not protected by the proposed PSCW rules.

Farmland preservation is vital. Heavy consideration is given to any new requests to take farmland, including manure pits, silos, an acre or two for a home...all weighed very heavily...EXCEPT for commercial wind factories. They are permitted to march onto farmland and take up huge amounts of acreage for the turbine site and for access roads...and towns have no say except via health and safety...and the STATE OF WISCONSIN takes that away with mandatory setbacks and sound levels. Farmland is not protected by the proposed PSCW rules.

Infrasound/Infrasonic and Low Frequency Sound exists...period. It's documented. The PSCW won't even touch it. Not everyone feels it in their body, but some of the most vulnerable do. As more turbines are sited throughout the world, the measurement will be gathered and reported to health departments...and then who pays? As the lawsuits come forward, who will be named? The vulnerable are not protected by further setbacks in the proposed PSCW rules.

Flicker...why should any non-participating property be forced to accept even one minute of flicker? A resident purchases their property to enjoy. They should be able to enjoy their entire property...patio, lawn, garden, etc., without flicker. The PSCW provides a minimum of 20 hours INSIDE THEIR HOME before it becomes eligible for mitigation. And what mitigation is suggested...blinds, shrubbery, trees. Why not just put the resident in their basement and lock the door? The resident is not protected by the proposed PSCW rules.

When the day is done, the ONE thing we have left is our home. It's where we live, raise families, rest, relax, reenergize. The proposed PSCW rules do not protect our home.

Best practices are not used by the wind companies. They go door to door in dress-down clothing selling 40-50 story turbines as if it is a set of cookware. They won't disclose why they go behind the scenes, door-to-door instead of at a "storefront" level of disclosure, utilizing best practices.

They often produce false statements that everyone is signing up and you will be surrounded by turbines anyway, so you might as well sign the contract. They also often harass and use pressure methods toward the resident with repeated visits and phone calls even when they have been told no. They have deep pockets and offer money as their prime selling point. Examples include offering \$25,000 for a temporary easement during turbine construction. Another is becoming the mortgage holder of a farmer's property so the farmer could host two turbine sites and obtain yearly payments for 25-30 years. Those are not best practices.

They don't mention that 50 dBA is city noise, not rural noise, that setbacks in the United States are less than the rest of the world. They don't discuss property value impact, blade throw, ice throw, flicker, stray voltage, well contamination, turbulence, audible and inaudible noise, health concerns, concerns for their neighbors, etc. They leave that for the Town Board to address.

And then...they come to the town with the application. The proposed PSCW rules do not protect safety and welfare of residents by requiring the turbine companies come to the town first so the town can ensure neutral information is provided to help educate the residents to this UNFAMILIAR, HUGE, IMPACTFUL development that affects those who chose to participate AND THOSE WHO DO NOT CHOSE TO PARTICPATE.

I realize the need to have renewable energy in place...but why the race to meet a deadline at the cost of innocent rural residents? One should easily realize that each area needs to be checked individually, area by area, town by town, state by state to see what type of renewable energy best fits into that specific environment.

Why would we not err on the side of protecting humans, animals, land, environment, this spinning globe we live on, etc., instead of protecting the "rights" of companies? Erring on the side of health and safety is to everyone's advantage. Start with further setbacks and measure what happens. Who pays to pick up a 40-50 story high turbine on a cement foundation and move it back further? Of course that is absurd.

The question still begs as to why we throw away the measurement obtained from countries throughout the world with lower dBA levels and further setbacks. Or is it because then turbines wouldn't be sited in the populated rural/residential areas? Hmmm.

When our local Health Departments, County Boards of Supervisors, DNR, DATCP, Acoustic Engineers, Professional Engineers, etc., are all writing and speaking to the PSCW and NO ONE IS LISTENING...there is something very, very wrong.

These organizations and professionals request NO TURBINES BE ERECTED in southern Brown County due to Karst features. They request NO SHADOW FLICKER to a non-participating resident on any area of their property be permitted. They request a MINIMUM of ½ mile setback (many request a one mile setback) from the PROPERTY LINE of a non-participating resident. But again...then no turbines would be sited in rural areas in

Glenmore, Holland, Morrison, or Wrightstown. The proposed PSCW rules ignore the health and safety of humans.

Unfortunately something smells really bad here...and it's not the manure of the countryside.

When all is said and done...we only have our good name left.

Please use your good name to step forward and slow things down. While these issues may not be within your reach or scope of job description, I hope you will stand tall and step forward as a human and request and support a thorough review of the proposed PSCW rules so they are not rammed through.

The PSCW minority report and comments by Commissioner Azar help make up that "little voice" that reminds us that all things are "just not right" with the proposed PSCW rules.

Help the PSCW understand that Health and Safety INCLUDES establishing safe RURAL noise limits and safe setbacks to the property lines of Participating and Non-Participating residents. Help the PSCW understand that establishing setbacks and noise limits WITH DISREGARD FOR HEALTH AND SAFETY...is WRONG AND HIGHLY DANGEROUS.

I hope you will also assure that someone actually visits our towns to see how populated they are.

Eyes are watching...

Kindest Regards,

Pat Kolarik

6988 County Road X

Denmark, WI 54208 (Home location is Town of Glenmore.)

920-863-8005

rummajer@gmail.com

PS: Although I write this as a resident of Glenmore, I want to disclose that I also hold a position on the Board of Directors of the Brown County Planning Commission (representing Glenmore and Morrison), as well as the Town of Glenmore Planning Commission.